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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/624,678	SUGITA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to August 31, 2005.
2. ☒ The allowed claim(s) is/are 1-9 and 11-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

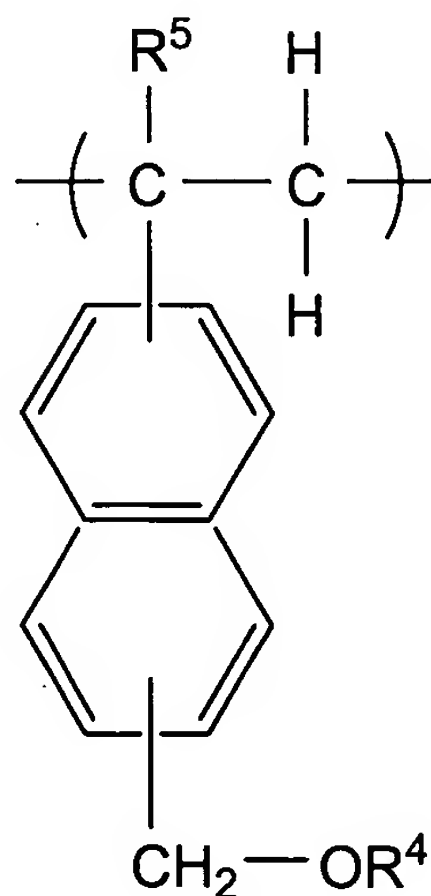
**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven B. Kelber on November 9, 2005.

Claims 11, 13, and 15:

In each claim, replace the figure with the figure shown below (brackets and integer *n* have been removed).



Claim 13, line 8      delete " and *n* is 0 or 1, "

Claim 15, line 8      delete " and *n* is 0 or 1, "

***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: Claims 1-9 and 11-16 are allowed.

The present invention is drawn to a polymer containing a structural unit of formula (3) (see claims for details). The structural unit is derived from an acenaphthylene monomer containing a  $-\text{CH}_2\text{-OR}^1$  group. The  $M_w$  of the polymer lies in the range of 500-10,000. Anti-reflection film forming compositions derived from the polymer also lie within the scope of the invention.

Another aspect of the invention is an Anti-reflection film forming composition having a structural unit (4). The structural unit is derived from a vinyl naphthalene monomer containing a  $-\text{CH}_2\text{-OR}^4$  group.

A further aspect of the invention is an Anti-reflection film forming composition comprising a polymer having structural units (3) and (4), a polymer having structural units (3) and (5), or a polymer having structural units (4) and (5), where (5) is a monomer unit derived from acenaphthylene.

Another aspect of the invention is a claim to the compounds acetoxymethyl-acenaphthylene (1) and hydroxymethylacenaphthylene (2).

Murata *et al.* (JP 6-161111), Eichorn *et al.* (U.S. 5,654,121), Yamada *et al.* (WO 01/13179), Shimokawa *et al.* (JP 9-230596), Shimokawa *et al.* (JP 8-184966), Kizu *et al.* (JP 10-090885) have been cited previously as closest prior art. The references disclose films derived from polymer containing styrene monomer units in which the aromatic ring is substituted with a  $-\text{CH}_2\text{-OR}$  group. None of the references discloses polymers containing units derived from corresponding vinyl naphthalene monomers.

Art Unit: 1713

Carpino *et al.* (*J. Org. Chem.*, 1964) discloses the compound 5,6-acenaphthylene-dimethanol. This compound is analogous to compound (2), except there are two hydroxymethyl groups instead of only one, as claimed.

Kawaguchi *et al.* (EP 1 205 805; U.S. 2002/0086934) discloses polymers derived from acenaphthylene derivatives in which substituent R<sup>1</sup> is hydrogen, alkyl, alkenyl, hydroxyl, amino, phenyl, acyl, carboxyl, sulfonic acid, mercapto, *etc.* The reference does not disclose or reasonably suggest use of -CH<sub>2</sub>-OR groups.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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November 10, 2005

  
DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700